SPECIFICATION

To All Whom It May Concern:

Be It Known That I, **FRED D. OBERHAUS**, being citizens of the United States and residing in the City of Chesterfield, County of St. Louis, and State of Missouri, respectively; whose full post office address is 1808 Cayman Ct., Chesterfield, Missouri 63017, respectively, have invented new and useful improvements in

SYMMETRICALLY DESIGNED SNAP-ON SHELF

CROSS REFERENCE TO RELATED APPLICATION

The invention of this non-provisional patent application claims priority to the United States provisional patent application having Ser. No. 60/416,433, which was filed on October 7, 2002, and which claims priority to the design patent application having Serial No. 29/168,754, which was filed on October 9, 2002. Both of the above referenced patent applications are owned by a common assignee.

BACKGROUND OF THE INVENTION

A variety of shelving, stacking shelving, shelving supported by brackets, shelving which is adhered directly to a wall, or door, are readily available in art. For example, the storage shelf patented under United States patent No. Des. 378,481, shows a storage shelf, to one of the inventors as described herein, and which has been assigned to the same assignee as herein, which shelf can be applied to a bracket, wall, or the like, and provide reinforcement against bending, due to its structural integrity, and of the appearance as shown in this design patent.

Additional prior art owned by the same assignee as this current invention, discloses the design for a bracket, in United States design patent number Des. 369,293, showing a bracket for adherence to the wall, a door, or the like, and which can have a shelf applied thereto, when the entire shelf and bracket are assembled for installation.

Other wire shelving and bracketing systems can be seen in the United States patent No. 5,346,077, disclosing a flanged lock type of bracket for mounting to a wall, and for supporting a shelf.

These are examples of the type of prior art shelving systems, and their holders, that have been used for applying shelving to a generally vertical wall surface area.

SUMMARY OF THE INVENTION

This invention principally relates to symmetrically designed shelving that can be snapped-on to end brackets and supported upon a wall, a door, or other surface.

This invention contemplates the formation of a wire fabricated shelving, which is symmetrical in width, and of the same configuration integrally along its front and back edges, so that the shelf, when applied to its brackets, need not particularly furnish a front part of the shelf, or back part of the shelf, but rather, because of its symmetrical design, can be snapped into position regardless which edge is provided at the front. The particular brackets used in combination with the shelf is a molded bracket, and includes clearance at both its front edge, and back edge, and incorporates aligned slots at these opposite edges, so that the shelf, and particularly at its down turned ends, can snap fasten into the bracket slots, be quickly and stably installed, and immediately available for usage, after the brackets, and their integral base plates, have been fastened to the supporting wall, door, or other vertical structure.

In addition, because of the symmetry of the shelving at both its front and back edges, the brackets, likewise, are of the same design, and regardless rather the brackets are applied to the left side of the shelf, or the right side of the shelf, during their installation, are readily available for acceptance of the shelving, when snapped into a locked position for usage.

It is, therefore, the principal object of this invention to provide a symmetrically designed shelf for use in conjunction with brackets and which can be conveniently and stably snapped into position, when readied for usage.

Still another object of this invention is to provide shelving that is ambidextrous of design and its front or back edges may be reversed, when installed, and function identically during usage.

Still another object of this invention is to provide an integrated bracket that can be applied to either the left or right edges of the shelving, when installed.

Still another object of this invention is to provide shelving that incorporates lateral reinforcement rods at the downwardly bent front and back edges and

which are snapped into grooved positions provided upon such brackets to securely hold the shelving in place, during usage, obviating the need of any other fasteners to stably hold the shelf during usage.

These and other objects may become more apparent to those skilled in the art upon review of the invention as described herein, and upon undertaking a study of the description of its preferred embodiment, in view of the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

In referring to the drawings, Fig. 1 provides an isometric view of the symmetrically designed snap-on shelf for application by brackets to a wall or other supporting surface;

Fig. 2 is an isometric view of one of the brackets of Fig. 1;

Fig. 3 is a side view of the bracket, with the shelf applied, when installed to a supporting surface; and

Fig. 4 is a front view of the bracket of this invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In referring to the drawings, and in particular Fig. 1, the symmetrically designed shelf 1 of this invention is readily disclosed. As can be seen, it includes a series of longitudinally arranged structural rods 2 provided along the front and back edges of the designed shelf, and a mid point rod 3 provided intermediate thereof. In addition, a series of laterally extending shelf rods 4 are provided, arranged along the length of the shelf, with the entire assembly of rods being welded together, to provide securement of the wire shelf into its integral structure. The lateral rods 4 are bent downwardly, as at 5, at both their front and back edges, and are otherwise secured to the depending lower longitudinally extending rods 6 as can be noted.

Thus, the shelf, when formed, is designed to function for a variety of purposes. One, it provides structural integrity because of the downward bend of the lateral rods 4, as noted at 5, and secondly, the lower rods 6 add reinforcement at the front and back edges of the shelf, as designed. Furthermore, additional lateral

rods are provided at the ends, as at 7 and 8, to add further structural integrity to the shelf at these locations. Secondly, designing the shelf in this manner, where both the front and back edges have symmetry, of design, it makes no difference which edge of the shelf is installed to the front, or the back, since either way, the shelf can be installed when assembled upon its brackets, to function as a wall shelf, as can be understood.

As previously summarized, the shelf may be installed against a wall, a door, or any other approximate vertical surface, to provide shelving, of the design as shown.

In addition, at each approximate end of the shelf is provided a bracket 9, and which is designed for accommodating the application of the wire shelf thereto, as to be described. As noted, the bracket includes an integral bracket structure 10 which is reinforced with various ribs 11, having a lower rib 12 and which are connected or otherwise integrally formed with a base plate 13 as noted. The base plate 13 includes apertures, as at 14, to either side, so that a series of fasteners, such as screws, dry wall bolts, or the like, can be fastened therethrough, for attachment of the bracket to a wall, when installed.

In addition, it is to be noted that the base plate provides clearance, as at 15, at the back side of the bracket, and further includes a formed groove 16 therein, while the upper edge of the bracket, as at 17, forms a slight bevel, or arcuate groove, so that when the shelf is installed initially, the rods 2 and 6 can insert within their respective grooves 17 and 16, and hold that part of the shelf in place, as it is being installed, as during installation.

It is to be particularly noted that in the assembly and installation of this shelf, the brackets themselves, initially, are applied to the surface of the wall, door, or the like. Once they are installed, then the shelf 1 can be installed. This is done by inserting the back end of the shelf, as along its rods 2 and 6, which are slid into the clearance area 15, and then pulled forwardly and snapped into position at the front 18 of the brackets, as can be seen.

In addition, the front ends of the bracket as at 18, includes grooves 19 and 20, and are designed for accommodating the lower edge rods 2 and 6, of the shelf, at the frontal location, which are snapped against their resiliency into place upon the bracket, as the shelf is being installed. Obviously, at least a pair of the brackets will have previously been installed along a horizontal alignment to the wall or door, in preparation for acceptance of the shelf, in position, during installation.

In addition, and since the shelving preferably includes, but does not necessarily require, a mid point longitudinal rod 3, the upper rib 21 of each bracket includes a further groove 22, at its mid point, so as to accommodate the location of the longitudinal rod 3 therein, when the shelving is installed.

This relationship between the shelving, its various longitudinal rods, the grooves formed associated with the upper region of each bracket, can be readily seen from the assembled shelving, as noted in Fig. 3.

Fig. 4 provides a front view of the individual brackets, where two or more of such brackets are used for supporting the snap-on shelf in position against a supporting surface. Obviously, fasteners or screws can be applied through the apertures 14, to secure each bracket in place.

As can be understood, the shelving, because of its length, and because it is formed of wire structure, and because the lateral width of the shelving will be of some significant length, approximately twelve inches (12"), eighteen inches (18"), twenty four inches (24"), more or less, of design, such shelving will have some inherent resiliency, that will allow its eventual front edge to be bowed outwardly, to furnish clearance for locating of the lower longitudinal rod 6 within its associated groove 20, as the shelving is being installed. Obviously, the back edge longitudinal rods 2 and 6 will have previously been inserted within their respective grooves 17 and 16, as explained.

While the shelving will generally be formed of assembled wire components, in the manner as previously explained, the brackets generally will be fabricated and molded from preferably a polymer, although other forms of bracketing may be employed for this purpose, provided that they incorporate the

various structures for accommodating the symmetrical shelf, in place, when assembled, and when used.

Variations or modifications to the subject matter of this invention may occur to those skilled in the art upon review of the invention as described herein. Such variations, if within the spirit of this development, are intended to be encompassed within the scope of the invention as described. The description of the preferred embodiment, and as shown in the drawings, is furnished for illustrative purposes only.